MEDIBEATS
The Medical Bulletin

In Hematology

RDW – A NOVEL PROGNOSTIC BIOMARKER FOR COVID – 19?

- Red blood cell distribution width (RDW, is a measure of the range of variation of red blood cell (RBC) volume that is reported as part of a standard complete blood count),
- Two types of RDW - RDW-CV and RDW-SD.RDW –CV is more commonly used value and given by the hematology analyser.
- Normal reference range of RDW-CV in human red blood cells is 11.5–15.4%.The range may slightly vary between laboratories.
  - Causes of High RDW
  - Nutrient Deficiency
  - Alcoholism
  - Liver Disease
  - Inflammation

- Limitations – If an RDW is drawn after a blood transfusion, it won't accurately reflect the RDW of a person's cells. If a lab uses EDTA anticoagulated blood instead of citrated blood, the reading will be falsely high. Since the RDW-CV is calculated using MCV, an error in MCV will result in an error in the RDW?
- RDW has been suggested, in combination with hemoglobin and neutrophil to lymphocyte ratio, as a diagnostic and prognostic biomarker of COVID-19
- Causal -effect relationship between SARS-CoV-2 infection and elevated RDW is highly unlikely. Instead, it is more likely that increased RDW is indicative of patients' comorbidities and thus may identify those patients at increased risk for mortality

Reference -Increased Red Cell Distribution Width Is Associated with Disease Severity in Hospitalized Adults with SARS-CoV-2 Infection: An Observational Multicentric Study

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